IN THE CLAIMS

Claims 1-130 are presented below:

Claims 1-111 (canceled).

112. (Currently Amended) A method of forming a barrier metal film formed of a nitride film including tungsten by thermal CVD, comprising:

positioning a substrate in a processing vessel;

maintaining a ~~predetermined~~ pressure in the processing vessel;

forming a film containing tungsten on one side of the substrate by supplying a process gas including WF_6 gas and SiH_4 gas into the processing vessel;

shutting off the supplying of the ~~WF_6 gas and SiH_4~~ process gas into the processing vessel;

removing ~~WF_6~~ the process gas from the processing vessel by supplying a purging gas into the processing vessel, while evacuating the processing vessel; and

nitriding the film containing tungsten by supplying ~~a~~ NH_3 gas ~~containing nitrogen~~.

113. (Currently Amended) The method according to Claim 112, wherein the nitriding of the film is performed by generating plasmas ~~with the gas containing nitrogen~~.

114. (Previously Presented) The method according to Claim 112, wherein the forming of the film and nitriding of the film are performed in the same processing apparatus or different processing apparatus.

115. (Currently Amended) The method according to Claim 112~~, wherein the gas containing nitrogen includes~~ wherein said nitriding comprises supplying at least one of ~~NH_3,~~ ~~MMH,~~ MMH and N_2.

116. (Previously Presented) The method according to Claim 112, wherein the film containing tungsten is formed at a temperature of about 300 to 450°C and on a pressure of about 0.5 to 80 Torr.

117. (Previously Presented) The method according to Claim 112, wherein the film containing tungsten is made of W or ~~Wsix~~ WSix.

118. (Previously Presented) The method according to Claim 112, wherein the nitriding of the film is performed by using MMH gas under following process conditions:

an amount of MMH gas: about 1-20 sccm,

temperature: about 300-450°C,

pressure: about 0.1-5 Torr.

119. (Previously Presented) The method according to Claim 112, wherein the nitriding of the film is performed by using N_2 gas under following process conditions:

an amount of N_2 gas: about 50-300 sccm,

temperature: about 300-450°C,

pressure: about 0.1-5 Torr.

120. (Currently Amended) The method according to Claim 112, wherein the film containing tungsten is made of ~~Wnx~~ WNx or ~~WsixNy~~ WSixNy.

121. (Currently Amended) A method of forming a barrier metal film formed of a nitride film including tungsten by thermal CVD, comprising:

positioning a substrate in a processing vessel;

maintaining a ~~predetermined~~ pressure in the processing vessel;

forming a film containing tungsten on one side of the substrate by supplying a gas containing tungsten and a gas containing hydrogen into the processing vessel;

shutting off the supplying of the gas containing tungsten and gas containing hydrogen into the processing vessel;

removing the gas containing tungsten from the processing vessel by supplying an inert gas as a purging gas into the processing vessel, while evacuating the processing vessel; and

nitriding the film containing tungsten by supplying ~~a~~ NH_3 gas ~~containing nitrogen~~.

122. (Currently Amended) The method according to Claim 121, wherein the nitriding of the film is performed by generating plasma ~~with the gas containing nitrogen~~.

123. (Currently Amended) The method according to Claim 121, wherein said nitriding comprises supplying ~~the gas containing nitride includes~~ at least one of ~~NH_3,~~ MMH, and N_2.

124. (Previously Presented) The method according to Claim 121, wherein the gas containing H_2 includes at least one of H_2 gas, SiH_4 gas, Si_2H_6 gas, and SiH_2Cl_2 gas.

125. (Previously Presented) The method according to Claim 121, wherein the film containing tungsten is formed at a temperature of about 300 to 450°C and on a pressure of about 1.0 to 80 Torr.

126. (Currently Amended) A method of forming a barrier metal film formed of a nitride film including tungsten by thermal CVD comprising:

positioning a substrate in a processing vessel;

maintaining a ~~predetermined~~ pressure in the processing vessel;

forming a film containing tungsten on one side of the substrate by supplying a WF_6 gas and SiH_4, gas or H_2 gas into the processing vessel;

shutting off the supplying of the WF_6 gas and SiH_4 gas or H_2 gas into the processing vessel;

removing the WF_6 gas from the processing vessel by supplying an inert gas as a purging gas into the processing vessel, while evacuating the processing vessel; and

nitriding the film containing tungsten by supplying a gas containing ~~nitrogen~~ at least one of NH_3 and N_2 and forming a plasma of the gas containing ~~nitrogen~~ at least one of NH_3 and N_2.

127. (Currently Amended) The method according to claim 126, wherein said nitriding comprises supplying ~~the gas containing nitride includes at least one of NH_3,~~ MMH_x ~~and N_2~~.

128. (Previously Presented) The method according to Claim 126, wherein the film containing tungsten is formed at a temperature of about 300 to 450°C.

129. (New) The method according to claim 112, wherein a polysilicon layer is formed on a gate insulating film formed on the substrate, the film containing tungsten being formed on the polysilicon layer.

130. (New) The method according to claim 112, wherein an insulating layer is formed on the substrate, the film containing tungsten being formed on the insulating layer.